A newsletter for employees and friends of the Y-12 National Security Complex.

JUNE/JULY 2013

the Y-12 times

inside this issue ...

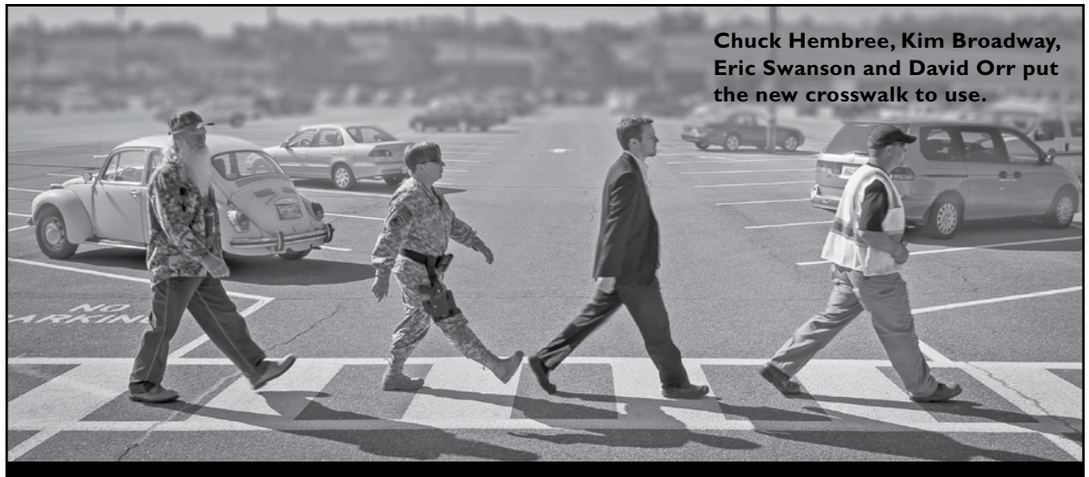
photo courtesy of Terry Marlar. Pictured are from front to back, Finn, Zoey and Abe

Always use safety belts and car seats for your loved ones!

New Energy Secretary visits Y-12

On June 3 newly appointed Secretary of Energy Ernest Moniz (right) made Oak Ridge the site of his first official visit since being sworn in as head of the U.S. Department of Energy. Secretary Moniz met earlier in the day with national lab directors at Oak Ridge National Laboratory, then came to Y-12 for tours and a meeting with the National Nuclear Security Administration Production Office, B&W Y-12 and ORNL employees. He was joined by Rep. Chuck Fleischmann.

The Secretary described Oak Ridge as a place where DOE's chief missions of nuclear security, environmental management and science play out. He talked about the importance of the Uranium Processing Facility for the enduring mission of stockpile work, of the legal and moral imperative to clean up Cold War legacy material, and of safety and security as crucial site responsibilities.



Chuck Hembree, Kim Broadway, Eric Swanson and David Orr put the new crosswalk to use.

WHICH ROAD TO TRAVEL?

There's no question which road (crosswalk) to travel when you park in the North Portal parking lot. Thanks to the recent restriping of the parking lot, the crosswalk and parking spaces are clearly marked.

Earlier this year, the Employee-Driven Safety Campaign was created as a way to easily submit safety issues as we continue pursuing Safety for Life and our Voluntary Protection Program focus. Y-12 is a large site, so it takes all of us to ensure we keep things in tip-top safety shape.

This tool allows employees or employee teams to submit safety concerns or site conditions that need to be addressed. Once in the system, the Employee-Driven Safety Campaign team, made up of employees from around the site, including representatives from each union, and led by Environment, Safety and Health's Senior Director and Deputy Manager Yvonne Bishop, ranks the submitted items. Items are then prioritized by how likely they could cause an injury.

Many of the issues identified are behavior-related — meaning we need to change our behavior. Examples include walking up or down stairs without holding the handrail or driving across parking rows in a parking lot.

As President and General Manager Chuck Spencer stressed, "Safe behavior is an expectation I have for myself and for all Y-12 employees. Let's make sure we hold ourselves and each other accountable for safety so we can all work without accident and go home injury-free."

INNOVATION: the gateway to modernization

Much like Janus, the Roman god with two opposing faces, we look back in remembrance of our 70-year history and forward in anticipation of the future. Today our vision is for Y-12 operations to become smaller, more responsive, sustainable and cost-effective. Achieving that vision requires integrating new technologies into production operations. The Janus spindle is one such technology in development at Y-12 that can help make modernization a reality.

Today existing machine tools at Y-12 are equipped with conventional spindles. These spindles have only one end that rotates the part during a machining operation. The Janus spindle however has two rotating ends. Both types of spindles must be fitted with fixtures to hold the part during machining operations, yet the dual-faced Janus spindle provides more flexibility and greater efficiency.

Because as many as five separate machining operations may need to be performed on a single part, and each operation may require a different fixture to hold the part, machinists currently spend considerable time transferring parts between machine tools and aligning them to individual fixtures. Those tasks are especially difficult because the work is performed inside gloveboxes or other hazardous-material enclosures.

The Janus spindle is designed specifically for such applications and is a key component of modernized machine tool operations at Y-12. Its two rotating ends permit multiple machining operations to be performed without changing out fixtures; its compact design fits more easily inside a glovebox.

A Production manager said, "With the integration of a new smaller glovebox, the Janus spindle will provide needed flexibility and agile technology enhancement to our existing production capabilities while reducing worker exposure to hazardous materials."

Janus was developed using Plant Directed Research, Development and Demonstration funding.

JANUS SPINDLE BENEFITS

- **More flexibility** — supports multiple fixtures for machining parts
- **Greater efficiency** — reduces time needed to perform multiple machining operations
- **Increased capability** — can consolidate multiple operations onto one machine platform
- **Improved safety** — lessens material handling
- **Smaller footprint** — fits more easily inside a glovebox or enclosure
- **Cross-functional use** — integrates into different production areas

Hands-on learning
with a dash of cool

For the past eight years, Steve Dekanich from Quality Assurance has introduced the field of materials science to a notoriously tough crowd – teenagers. The ASM International Materials Camp is organized and sponsored by Y-12, Oak Ridge National Laboratory, Tech 2020 and the University of Tennessee. As the camp co-chairman, Dekanich plays a key role in finding organizations that will provide the materials needed for the camp and devising ways to immerse students in hands-on activities. "This is a technology-savvy generation," Dekanich said. "We put these kids in front of the scanning electron microscope (SEM), and within 30 minutes they are taking photos and analyzing data – it's amazing."

During the weeklong camp in June, students performed failure analyses on prosthetic implants including a hip prosthesis, pelvic clamps, a tibial nail and tibial component. An area surgeon provided the sterilized implants, along with X-rays showing the implants before they were removed from patients.

In a mobile metallography lab provided by Mager Scientific, students prepared material samples of the prosthetic implants and then moved to an electron microscope to identify the elements in each sample and capture images. Sitting in front of the scanning electron microscope, Justin Zanoni, a freshman at UT, was asked what he liked most about using the microscope. "Bragging rights," he said. "We've heard about electron microscopes but have never had the chance to see them or use them."

Like most of the students, Hunter Stombaugh, a student from William Blount High School, had no prior knowledge of materials science. Standing in the metallography lab, Stombaugh said, "It would be awesome to do something like this for a living."

Student Patricia Edou loads a material sample into a scanning electron microscope while fellow student, Justin Zanoni, prepares another sample. Hitachi and Keyance provided microscopes for the camp.

Oak Ridge hosts summit

The 2013 Tennessee Valley Corridor National Summit was held May 29–30 at Y-12's New Hope Center. U.S. Rep. Chuck Fleischmann hosted this year's summit with more than 400 registered for attendance. The theme was "Securing America's Future," and focused on manufacturing, energy, environment, work force and innovation.

During the summit, representatives from Y-12; the University of Tennessee, Knoxville; and Stanley Healthcare signed a cooperative research and development agreement. The three entities are sharing their expertise to fast-track commercialization of an intelligent interactive dashboard that can be used to increase efficiency in manufacturing, maintenance or the service industry.

The summit began in 1995 and now rotates among sites in the five-state region. The Tennessee Valley Corridor summit is focused on economic development and support of government-sponsored activities.

(Award, top left) At this year's event, Y-12, the Tennessee Valley Authority and the University of Tennessee were each presented with the Corridor Champion Award. "Each has been and will continue to be a major economic development asset to our region," said Gerald Boyd, Tennessee Valley Corridor executive committee member. (Photo, top right) U.S. Sen. Bob Corker kicks off the May 29 afternoon session covering innovation and entrepreneurism. (Photo, middle left) U.S. Sen. Lamar Alexander opens the summit. (Photo, middle right) "In a short period of time, Congressman Fleischmann has become a true champion for all that is good about our region, and he is a real leader for the continued growth and effectiveness of the Corridor," said Gerald Boyd, Tennessee Valley Corridor executive committee member (left) as he presents the Corridor Champion Award to Congressman Chuck Fleischmann. (Photo, bottom) Wayne Cropp (The Enterprise Center), Victoria Hirschberg (Tennessee Department of Economic and Community Development), Teresa Duncan (Roane State Community College), Van Mauney (B&W Y-12) and Mark Watson (City of Oak Ridge) discuss the Public/Private Partnerships at Work in the Valley session on May 30.

RACE AGAINST TIME

Less than two weeks after its March 5 release, *The Girls of Atomic City: The Untold Story of the Women Who Helped Win World War II* made the *New York Times* Best Seller List.

"The book tells the story of the Manhattan Project through the eyes of people in Oak Ridge," said author Denise Kiernan, who spoke to a standing-room only crowd at the American Museum of Science & Energy earlier this year.

Her research for the book included one-on-one interviews with Manhattan Project workers, their family members and Oak Ridge residents. The interviews provided valuable details about working at Y-12, X-10 and K-25, and about life after hours.

The catalyst for the book was a photo of the Calutron Girls taken by Ed Westcott. Kiernan stumbled upon the photo while researching an unrelated project and was hooked after reading the caption describing their work.

"I'm frequently asked, 'How is it we've never heard of the work that was done in Oak Ridge?'" Kiernan said. "It was a time of self-censorship — newspapers and magazines were not writing about things that could endanger the war effort." More than 70 years later, the Secret City is still widely unknown.

Kiernan encourages Manhattan Project workers to give an oral history, sharing not only hard facts for historical reference, but also human-interest stories for context. As time passes, chances decrease of preserving the stories in the words of those who lived them.

The Center for Oak Ridge Oral History, housed in the Oak Ridge Library, gathers and preserves these histories. Y-12's public website also has a collection of videos containing interviews with key personnel and Oak Ridge residents. These videos help fulfill the requirements of the National Historic Preservation Act to interpret the history of Department of Energy sites.

TREASURY OF Y-12 ORAL HISTORIES

More than 220 oral history interviews have been conducted at Y-12 since the Knowledge Preservation Management program was formalized in 2004, but even before then Y-12 was capturing valuable historical information for future generations.

"Y-12 initiated a knowledge preservation program years ago after realizing that more than half of its work force met retirement eligibility requirements," said Paul Wasilko, Uranium Processing Facility Integration.

The oral histories of former Y-12 employees have provided insight into the work life, social activities, and community during the Manhattan Project and have been shared in programs and books, such as *A Nuclear Family* and *The Girls of Atomic City* (see related story). Yet Y-12's oral histories serve another, more crucial, purpose as well.

"Although we have procedures and manuals, without these interviews we may not be able to produce product. We learn about things we wouldn't have known without talking to these people," Wasilko said. The video format allows interviewers to ask more specific and personalized questions.

"Capturing the thoughts and experiences of people who saw and did things that we don't do today – or don't do the same way – is important to helping us understand our work," Glenn Pfennigwerth of Engineering said.

KPM's oral history collection includes these notable recordings:

- Dr. John Googin. Lectures from this distinguished scientist's 50-year career are shown regularly during some employee information sessions.
- Herman Butler. Audio recordings capture Butler describing his experiences managing complex enriched uranium processes during the Cold War when operations ran 24/7.
- Tommy Thompson. Interviews with Thompson – employed at Y-12 for more than 60 years – reveal how differently production issues were handled during wartime.
- Bob Walker. Responsible for field implementation of security related to weapons and uranium, Walker knew the plant, processes, and how they were interrelated.
- Bob Presley. A product engineer who interfaced with the national laboratories on the fabrication of new builds during the Cold War era.

The KPM database allows employees to search a single topic and retrieve multiple interviews. "One interview may not provide every answer someone is looking for, but there are nuggets in each one," Pfennigwerth said. Those nuggets create a gold mine of information for future generations to gain a better understanding of the processes, the problems and the people who came before them.

THE STORY OF ONE OAK RIDGER

At 8, Allen Ryon was driving his father's Model T on the family farm in northern Ohio. "I drove the car, pulling a trailer with barbed wire, so my father could mend fences. We were in hard times in the 1930s," he said. Then, with a college degree and some real-world experience under his belt, Ryon went in search of a job and landed in Oak Ridge in 1944 in the thick of the Manhattan Project.

At 24, he was assigned to research in chemical processing at Y-12. "In 1944 when I hired in, I didn't know anything about uranium chemistry. We had a German textbook on uranium chemistry," he explained. "Every day I studied that book. I had one year of German in college, and that and a German dictionary were enough to help me learn uranium chemistry."

He also recovered uranium from the machine wash. "We'd pull the tank away from the big calutron and wash it with nitric acid to recover and repurify the valuable, partially enriched uranium so it could go back into the process. We didn't want any of it to go to waste," he said.

At 93, Ryon's still driven, recently completing a three-week RV trip through ten states and currently planning the family's annual summer camping and fishing trip to Dale Hollow Lake. He hopes to replace the mounted 11-pound walleyed pike that adorns his living room wall with a fish that's "just a little bit bigger."

A "Phil-good" story

Recently, the Uranium Processing Facility team honored one of its own – Phil Schuetz – by raising money for the University of Tennessee Medical Center Cancer Institute's Campaign for Hope and by planting a pink dogwood.

When Schuetz came to Y-12, he came in a flurry of pink as a supporter of the Susan G. Komen Foundation for breast cancer research. (See related story in the August 2008 issue of *The Y-12 Times*.) In 2012, Schuetz and his Y-12 family added purple to their colors to support those with pancreatic cancer – the disease Schuetz is battling.

The UPF team raised more than $2,600 in March for the UT cancer institute's Campaign of Hope. The campaign focuses on creating better facilities, better care and more opportunities for everyone who is touched by cancer. Cindy Ford of Document Management, UPF Support, referred to collecting donations during the UPF all-hands meeting as a "Phil-good day."

Honoring Schuetz didn't stop there. The group had a dogwood planted in conjunction with the Y-12 Earth Day events and in honor of Schuetz. Now, the tree grows at the overlook across from HEUMF.

Schuetz said, "We hope employees enjoy watching the dogwood grow as we watch UPF grow."

Y-12 Fellow recounts experience

Imagine having the opportunity to step away from your current position for two years to pursue your dream job. That's exactly what Greg Schaaff did in his Technology Fellowship at Y-12. While it may have been the opportunity of a career, Schaaff took a bold step by becoming the first Fellow ever to enter the program. Looking back on his experience, he said, "The Fellowship was one of the most valuable career opportunities I could have been awarded."

The Technology Fellowship gives Y-12 scientists and engineers the opportunity and budget to work on a research project — based on their Fellowship proposal — that would advance technology and science at Y-12.

"I didn't see the Fellowship as a leap of faith; it just seemed like a perfect avenue to do something different," Schaaff said. During his time in the program, he pursued his own interests and gained experience in less-familiar areas. The highlight was his involvement with the nuclear forensics program, which allowed him "to contribute to the future direction of Y-12 in areas that will be important as the site transforms over the coming years."

Schaaff sees considerable value in continuing the program "to provide other early- to mid-career scientists and engineers the same opportunity to view Y-12, NNSA [National Nuclear Security Administration], DOE [U.S. Department of Energy] and other federal agencies through the prism I was afforded." Now as the chief materials scientist, the trajectory of his career is a testament. Schaaff's final message to future Fellows: "Be ready to work hard. The reward is well worth the effort."

In memoriam

John Miller of Emergency Services passed away May 5. He had 35 years of company service.

He is listed as a member of the organization in which he last worked. Y-12 offers condolences to his friends and family.

In memoriam

Peggy Gibson of Production passed away June 7. She had 37 years of company service.

"Glen Culver, who worked with Gibson for more than 18 years, said, "Peggy was a dedicated worker and a good friend. She always believed in doing her part and helping others when she could. She played a vital role in many of our efforts at 9212. Dedication, commitment and loyalty were values that Peggy lived by in all walks of her life. These valuable traits were her identity to all that were blessed to have known her."

In memoriam

James "Ted" Melhorn of Production passed away June 21. He had 21 years of company service.

He is listed as a member of the organization in which he last worked. Y-12 offers condolences to his friends and family.

Y-12 Service Anniversaries

June

46 years

Engineering: **Samuel M. O'Neal Jr., Louis Powell** and **James H. Rollins**
Quality Assurance: **Michael W. Poore**

45 years

Quality Assurance: **Ralph S. Leete Jr.**

44 years

Business Services and Performance Assurance: **William D. Cain**
Facilities, Infrastructure and Services: **Dewitt Upton**
Program Management: **Roger D. Bolin**

43 years

Production: **Perry Anthony Jr.**
Safeguards, Security and Emergency Services: **Robert P. Galyon**

41 years

Business Services and Performance Assurance: **Terry C. Domm**

40 years

Facilities, Infrastructure and Services: **Larry T. Petrowski**
Production: **Jerry L. Hall Sr.**
Safeguards, Security and Emergency Services: **Jimmy L. Felton**

35 years

Engineering: **Donna F. Bennett, Jeanne G. Chamberlin** and **Fredrick L. Markham**
Facilities, Infrastructure and Services: **Sharon P. Gasaway** and **Susie Jackson**
Projects: **Frank P. McHenry Jr.**
Quality Assurance: **Michael W. Darnell**
Safeguards, Security and Emergency Services: **Walter W. Wimes**

30 years

Business Services and Performance Assurance: **Timothy W. Hickerson** and **Carolyn H. Miles**
Engineering: **Jeffrey T. Cleveland, Paul D. DeMint, Carolyn H. Fogelman, Edward J. Klages, Roger L. Lawson**
Environment, Safety and Health: **Stanley L. Roberts**
Facilities, Infrastructure and Services: **Sheila D. Culpepper** and **Roger L. Yeary**
Human Resources: **Olga P. Henley**
Production: **James G. Justice**
Quality Assurance: **Sheila L. Roddy**
Safeguards, Security and Emergency Services: **Sandra P. Lyles**

25 years

Engineering: **James A. Henry II** and **Gail S. James**
Environment, Safety and Health: **Steven B. Jones**
Facilities, Infrastructure and Services: **Angelia L. Gordon** and **John D. Shipley**
Projects: **Gerald L. Bland**
Quality Assurance: **Thomas J. Oatts**
Safeguards, Security and Emergency Services: **Deborah K. Napier**

20 years

Chief Financial Officer Division: **Rhonda R. Hagler-Redwine**
Production: **Margie J. Crabtree**

July

48 years

Production: **Harvey L. Stevens**

45 years

Quality Assurance: **Ronald P. Allen**

44 years

Facilities, Infrastructure and Services: **Victoria Steward**

43 years

Facilities, Infrastructure and Services: **Erby L. Harris** and **David Vann**
Production: **Charles H. Neal**
Quality Assurance: **Gary W. Eckert**

41 years

Production: **Robert L. Runkles**
Quality Assurance: **Thomas W. Dews**

35 years

Engineering: **David E. Harvey** and **Terry C. Howell**
Facilities, Infrastructure and Services: **Faye S. Ellis, Gary L Martin, John S. McGaha, Rodney N. Scarbrough** and **James R. Sexton**
Production: **Kenneth W. Cook, Timothy J. Denton, Charles H. Fritts, Robert E. Goins, Gloria J. Jones**
Quality Assurance: **Carl T. Lyster**
UPF Integration: **Harry E. Henderson Jr.**

30 years

Chief Financial Officer Division: **Larry B. Creekmore**
Program Management: **Daniel E. Tracy**
Quality Assurance: **Tegwyn L. Berry**
Safeguards, Security and Emergency Services: **Lindsey L. Pyatt**

25 years

Engineering: **Benny Conley Jr., Arthur C. Miller Jr., Stanley O. Santich** and **Terri L. Warren**
Environment, Safety and Health: **Norman A. Teasley III**
Facilities, Infrastructure and Services: **Sarah K. Brady** and **Barbara V. Wojtowicz**
Office of the President: **Peggy L. Duncan**
Production: **Scott D. Abston**
Program Management: **R. Chris Robinson**
Safeguards, Security and Emergency Services: **Sharon A. Alcorn, William H. Harvey** and **Mark B. Ollis**
UPF Integration: **Terry L. Brown**

20 years

Business Services and Performance Assurance: **Cheryl H. Richter**
Facilities, Infrastructure and Services: **Phillip M. Clariday** and **Larry D. Wilson**

Volume 13, No. 6/7
June/July 2013
www.y12.doe.gov/news/times.php
P.O. Box 2009
Oak Ridge, TN 37831-8245

B&W Technical Services Y-12, LLC, a partnership between Babcock & Wilcox Technical Services Group Inc. and Bechtel National Inc., operates the Y-12 National Security Complex.

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Reaching out and reaching in

Y-12 has participated in Relay for Life since 2001, raising $137,000 in just the past five years. According to the American Cancer Society website, more than 4 million people raise funds annually to save lives from cancer through Relay for Life. This year, Y-12 employees again reached into their pockets in order to reach out to those affected by the disease. Thanks to some creative fundraising ideas, Y-12 donated more than $18,000 to the cause.

- **Construction Picnic** — Joe Kato's Construction group organized a fundraising picnic in May, collecting some $7,000.
- **Hawaiian Shirt Contest** — By paying to wear Hawaiian shirts and participate in a 'best shirt' contest, employees in Building 9212 raised $700 in honor of co-worker and friend, Peggy Gibson. "We knew Peggy was in the fight of her life," said Monty Fritts from Production. "She had battled cancer for the most part of 15 years. She kept coming back to work — just an absolute stalwart example of dedication to work and to her work family." Peggy Gibson passed away just before the Relay for Life event, and her co-workers displayed a banner in her honor during the event.
- **Kiss a Pig** — The Production organization put out collection jars, each with the photo of a department head. The management member with the most money in the jar by the end of the contest was scheduled to kiss a pig during the Relay for Life event at Oak Ridge High School. Managers could opt out by matching the donation in their jars plus $1. Although all of the managers opted out, three volunteered to kiss the pig during the event. "We didn't want to end up with any self-worth issues for the pig," joked Fritts. Fortunately for the managers, the pig was AWOL because of bad weather, and Production raised $2,500 to donate to Relay for Life.
- **Relay for Life Event** — Y-12ers were at the final event throughout the evening helping with fundraising activities including walking the track, assisting with luminaries, selling mementos and serving up barbecue donated by John Dye from Production. The barbecue sales alone raised $500.